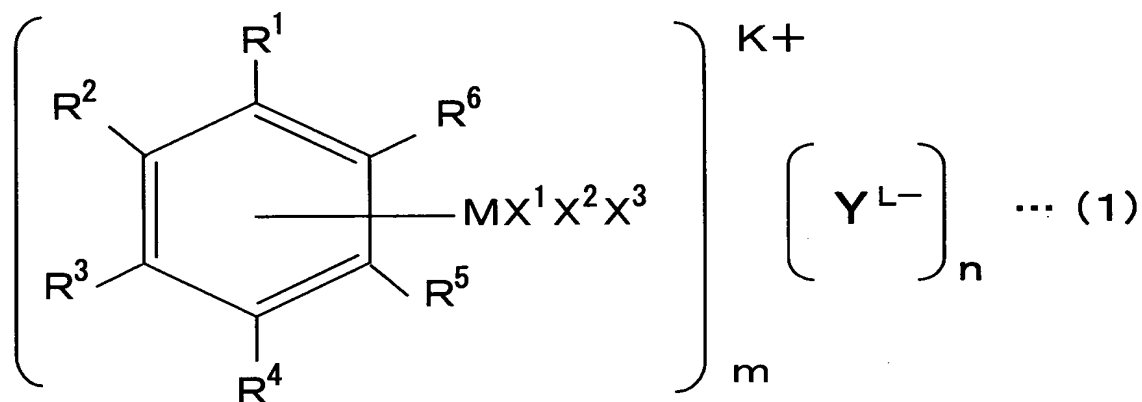


ABSTRACT

Carbon dioxide and water are mixed with an organometallic complex represented by general formula (1) below



where R¹, R², R³, R⁴, R⁵, and R⁶ independently represent a hydrogen atom or a lower alkyl group, M represents an element that can be coordinated to the benzene ring, X¹ and X² represent nitrogen-containing ligands, X³ represents a hydrogen atom, a carboxylic acid residue, or H₂O, X¹ and X² may be bonded to each other, Y represents an anion species, K represents a valency of a cation species, L represents a valency of an anion species, K and L independently represent 1 or 2, and K, m, L, and n are related to one another by K x m = L x n. This makes it possible to directly reduce carbon dioxide in water.